APRIL/MAY 2023

CEL61/BEL61/UEL61 — TELEVISION AND VIDEO ENGINEERING

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What are the characteristics of human eye?

2. List out the types of camera tubes.

3. What is space wave propagation?

4. Why is deemphasis done in TV receiver?

5. Define luminance and hue.

6. What is PAL system?

7. What are the merits of PAL-D system?

8. What is the function of AGC?

9. Why up-link and down-link frequencies are fairly kept apart from each other?

10. List the merits of digital TV receiver.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Write short notes on the scanning process.

Or

(b) Explain the photo electric effect.

12. (a) Explain the horizontal oscillator.

Or

(b) Explain the Yagi-Uda antenna.

13. (a) Describe the colour television camera.

Or

(b) Explain the following terms:

(i) Hanover bars

(ii) Delay line and

(iii) swinging burst.

14. (a) With a neat circuit diagram explain the saturation control.

Or

(b) Illustrate the automated phase control circuit.

15. (a) Mention the application of satellite communication domestic broadcast system.

Or

(b) Write a short note on video tape recorder.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. What is a composite video signal? Draw and explain the construction and working of vidicon camera tube in detail.

17. Explain the effect of noise pulses in positive and negative modulation.

18. Draw the Delta-Gun colour picture tube and explain the operation. What are the drawbacks of Delta-Gun tube?

19. Draw the block diagram of a PAL colour receiver.

20. Describe the concept of cable signal distribution.

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